

## 5.3 Air Quality

This analysis of air quality impacts uses methodologies prescribed by the South Coast Air Quality Management District (SCAQMD), including the URBEMIS program. **Appendix C** contains the worksheets and computations that document the analysis and conclusions presented in this section.

The analysis focuses on air quality impacts associated with the adoption and implementation of the proposed General Plan, adoption and implementation of the revised Zoning Code and Subdivision Code, and adoption and implementation of the Magnolia Avenue Specific Plan, as these actions have the potential to have air quality impacts in the Planning Area. The Citywide Design Guidelines and Sign Guidelines only address site planning, building design and community aesthetics and are thus not considered relevant to this analysis.

### Environmental Setting

The City of Riverside is located within the South Coast Air Basin (the Basin), as shown in **Figure 5-3** (South Coast Air Basin). Basin boundaries were drawn by the California Air Resources Board in an effort to develop a regional-level strategy to improve and maintain air quality, as required by the Federal Clean Air Act. Within the Basin, the South Coast Air Quality Management District (SCAQMD) is the regional agency responsible for air quality monitoring and stationary source control. The SCAQMD comprises four zones corresponding to non-desert portions of Los Angeles, Orange, Riverside and San Bernardino Counties.

In terms of overall air quality, the Basin is considered to have among the worst air quality in the United States. The Basin is considered a non-attainment area due to exceedances of the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) for ozone and inhalable particulate matter (PM<sub>10</sub>). Exceedances of State ozone standards are largely the result of transport of pollutants inland from the Los Angeles area due to meteorologic conditions.

### Climate and Meteorological Conditions

The climate in and around the City of Riverside, as well as most of Southern California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. This high-pressure cell typically produces a Mediterranean climate with warm summers, mild winters and moderate rainfall. This pattern is periodically interrupted by periods of extremely hot weather brought in by Santa Ana winds. Almost all precipitation occurs between November and April, although during these months, the weather is sunny or partly sunny a majority of the time. Cyclic land and sea breezes are the primary factors affecting the region's mild climate. The daytime winds are normally sea breezes, predominantly from the west, that flow at relatively low velocities.

Figure 5-3  
South Coast Air Basin

The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cup over the cool marine layer, which prevents pollution from dispersing upwards. This inversion allows pollutants to accumulate within the lower layer. Light winds during the summer further limit ventilation.

Because of the low average wind speeds in the summer and a persistent daytime temperature inversion, emissions of hydrocarbons and oxides of nitrogen have an opportunity to combine with sunlight in a complex series of reactions. These reactions produce a photochemical oxidant commonly known as smog.

## **Regulatory Setting**

Air emissions emanating from the Planning Area are under the authority of the SCAQMD and the California Air Resources Board (CARB). The SCAQMD is primarily responsible for enforcing regulations for new and existing stationary sources within the Basin and implementing appropriate transportation control measures. The CARB regulates and monitors mobile source emissions in conjunction with the SCAQMD. Other responsible agencies include the EPA and the Southern California Association of Governments (SCAG). The EPA is responsible for implementing the provisions of the Federal Clean Air Act (CAA), the corresponding National Ambient Air Quality Standards (NAAQS) and ensuring the development of plans that are designed to meet the appropriate air quality standards. The SCAQMD and SCAG are responsible for developing and implementing the Air Quality Management Plan (AQMP) for the Basin. The California Clean Air Act (CCAA) mandates implementation of a program that will achieve the California Ambient Air Quality Standards (CAAQS) and any new air quality performance standards.

### **Federal Clean Air Act (CAA) Requirements**

In November 1990, Congress enacted a series of amendments to the CAA intended to intensify air pollution control efforts across the nation. One of the primary goals of the 1990 CAA amendments was an overhaul of the planning provisions for those areas not currently meeting NAAQS. The CAA identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration and incorporates more stringent sanctions for failure to attain or to meet interim milestones.

### **National Ambient Air Quality Standards (NAAQS)**

The CAA established primary and secondary NAAQS for six criteria pollutants. These are risk-based, national ambient standards established to regulate, protect and improve the overall quality of air. Primary NAAQS are intended to protect human health, while the secondary NAAQS protect against other adverse effects to the environment. Compliance with the NAAQS is measured at certain locations within each designated air basin. The NAAQS are not directly enforceable against an emitting source. Rather, the source's emission limitations (which are directly enforceable) are set at levels calculated to support either Statewide or basinwide attainment of the NAAQS.

The EPA does not necessarily consider economic feasibility of meeting the NAAQS in setting these standards. The NAAQS are technology forcing standards, since the regulated industries are required to implement pollution control technologies to attain emission limitations based upon the NAAQS, or limit or cease operations. NAAQS are implemented by the states through enforceable source-specific emission standards.

The CAA identifies two types of sources: stationary sources and mobile sources. Stationary sources are regulated for all of the criteria and non-criteria pollutants, including hazardous air pollutants. Pollutants that are directly emitted into the atmosphere are known as primary pollutants, while secondary pollutants are formed by the reaction of other precursor pollutants.

In general, the CAA does not necessitate significant changes in attainment planning for the Basin, except requiring an attainment plan for  $PM_{10}$ . The CAA requires plans to provide for the implementation of all reasonably available control measures, as expeditiously as practicable, including the adoption of reasonably available control technologies for reducing emissions from existing sources. Emission control innovations in the form of market-based approaches are explicitly encouraged by the CAA. The SCAQMD is the first local agency in the country to adopt a market-based approach for controlling stationary source emissions of oxides of nitrogen and sulfur. The CAA also requires plans to include demonstrations for reasonable further progress, which is defined as annual incremental reductions in emissions of relevant air pollutants needed to ensure attainment of the NAAQS by the applicable date. A similar demonstration of progress was instituted in California with the passage of the California Clean Air Act (CCAA) in 1988.

On July 17, 1997, the EPA announced new national ambient air quality standards for ground-level ozone and particulate matter. Specifically, the EPA plans to phase out and replace the existing one-hour ozone standard with a new eight-hour standard, specifically the fourth highest eight hour average concentration not to exceed 0.08 parts per million (ppm) more than three times in three years. Additionally, the EPA had also revised the particulate matter standard by promulgating a new standard for fine particulate matter, which is defined as particulate matter less than 2.5 microns in diameter.

In the year 2000, the EPA planned to designate areas that do not meet the eight-hour ozone standard based on the most recent three years of ozone data available at that time (e.g., 1997-1999). To implement the  $PM_{2.5}$  standards, the EPA established a comprehensive monitoring network to determine ambient  $PM_{2.5}$  concentrations. The CAA requires that the EPA make designation determinations (i.e., attainment, nonattainment, or unclassifiable) within two to three years of revising a standard. However, due to litigation, the EPA has delayed designation determinations and the implementation of  $PM_{2.5}$  standards until further notice. The EPA is scheduled to promulgate air quality designations for the new eight-hour ozone standard by December 15, 2004. Currently, it is unknown when the EPA plans to begin implementation of the new  $PM_{2.5}$  standard.

#### **California Clean Air Act (CCAA)**

The CCAA established a legal mandate to achieve health-based State air quality standards at the earliest practicable date. The Lewis Presley Act provides that the plan must also contain

deadlines for compliance with all State ambient air quality standards and the Federally mandated primary ambient air quality standards [Health and Safety Code (H&SC) 40462(a)]. Through its many requirements, the CCAA serves as an important consideration in the Basin's attainment planning efforts. Essential CCAA requirements include the application of best available retrofit control technology and reduction of nonattainment pollutants and their precursors at a rate of five percent per year. If these measures cannot be implemented, each basin is required to include other feasible measures of emission reduction with an expeditious implementation schedule; reduction in population exposure to severe nonattainment pollutants (i.e., ozone, CO and NO<sub>x</sub> for the Basin) according to the prescribed schedule; and ranking control measures by cost-effectiveness and implementation priority. Finally, State law requires the plan to provide for attainment of the Federal and State ambient air quality standards at the earliest practicable date.

The CCAA serves as the centerpiece of the Basin's attainment planning efforts, since it is generally more stringent than the CAA. Based on pollutant levels, the CCAA divides nonattainment areas into categories with progressively more stringent requirements. The State nonattainment designations are made on a county-by-county basis. The entire Basin is an extreme nonattainment area for ozone. Although PM<sub>10</sub> is not explicitly addressed in the CCAA, it is governed by the Lewis Presley Act. The plan therefore provides strategies to achieve all Federal ambient air quality standards by their applicable date and State ambient air quality standards as early as possible.

## **Air Quality Standards**

The State of California and the Federal government have established air quality standards and emergency episode criteria for various pollutants. These standards are used to determine attainment of State and Federal air quality goals and plans. Generally, State regulations have stricter standards than those at the Federal level. Air quality standards are set at concentrations that provide a sufficient margin of safety to protect public health and welfare. Episode criteria define air pollution concentrations at the level where short-term exposures may begin to affect the health of a portion of the population particularly susceptible to air pollutants. The health effects are progressively more severe and widespread as pollutant concentrations increase. The health effects of and the current State and Federal standards for the six most important pollutants are presented in **Table 5-3-1**.

The following pollutants are regulated by the EPA and therefore are subject to emission reduction measures adopted by Federal, State and other regulatory agencies.

### **Ozone (O<sub>3</sub>)**

Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO<sub>x</sub>) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may reduce lung efficiency.

**Table 5.3-1  
Ambient Air Quality Standards\***

Air Pollutant	State Standard	Federal Primary Standard	Most Relevant Effects
	Concentration/ Averaging Time	Concentration/ Averaging Time	
Ozone	0.09 ppm, 1-hr. avg.>	0.12 ppm, 1-hr. avg.> 0.08 ppm, 8-hr. avg.>	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals. (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr. avg.> 20 ppm, 1-hr. avg.>	9 ppm, 8-hr. avg.> 35 ppm, 1-hr. avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr. avg.>	0.053 ppm, annual avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr. avg.> 0.25 ppm, 1-hr. avg.>	0.03 ppm, annual avg.> 0.14 ppm, 24-hr. avg.>	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM <sub>10</sub> )**	30 µg/m <sup>3</sup> , annual. geometric mean> 50 µg/m <sup>3</sup> , 24-hr. average >	50 µg/m <sup>3</sup> , annual arithmetic mean > 150 µg/m <sup>3</sup> , 24-hr. avg. >	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children; (c) Increased risk of premature death from heart or lung diseases in elderly
Suspended Particulate Matter (PM <sub>2.5</sub> )**		15 µg/m <sup>3</sup> , annual arithmetic mean > 65 µg/m <sup>3</sup> , 24-hr avg.>	
Sulfates	25 µg/m <sup>3</sup> , 24-hr avg.≥		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 µg/m <sup>3</sup> , 30-day avg.≥	1.5 µg/m <sup>3</sup> , calendar quarter>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount such that the extinction coefficient is greater than 0.23 inverse kilometers (to reduce the visual range to less than 10 miles) at relative humidity less than 70 percent, 8-hour average (10am-6pm)		Visibility impairment on days when relative humidity is less than 70 percent

\* For readers' convenience in picking out standards quickly, concentration appears first; e.g. "0.12 ppm, 1-hr. avg.>" means 1-hr. avg> 0.12 ppm.

\*\* New and stricter State standards for PM are proposed and adopted by ARB. They include: PM<sub>10</sub> annual average of 20 ug/m<sup>3</sup> and new PM<sub>2.5</sub> annual average of 12 ug/m<sup>3</sup>.

Source: South Coast Air Quality Management District, Air Quality Management Plan, 2003.

### **Carbon Monoxide (CO)**

Carbon monoxide is primarily emitted from combustion processes and motor vehicles because of incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhaling moderate levels of carbon monoxide can cause nausea, dizziness and headaches and can be fatal at high concentrations.

### **Particulate Matter (PM<sub>10</sub>)**

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (PM<sub>10</sub>), can enter and become trapped in the nose, throat and upper respiratory tract. As these small particulates enter the body, they could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials and damage lung tissue. The elderly, children and those with chronic lung or heart disease are most sensitive to PM<sub>10</sub>. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulate could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

### **Nitrogen Oxides (NO<sub>x</sub>)**

Major sources of NO<sub>x</sub> include power plants, large industrial facilities and motor vehicles. Nitrogen oxides are emitted from combustion processes and irritate the nose and throat. They increase susceptibility to respiratory infections, especially in people with asthma. The principal concern regarding NO<sub>x</sub> is that they are a precursor to the formation of ozone.

### **Sulfur Dioxide (SO<sub>2</sub>)**

Major sources of SO<sub>2</sub> include power plants, large industrial facilities, diesel vehicles and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. They also constrict the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath and coughing. High levels of particulate appear to worsen the effects of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

### **Lead (Pb)**

Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing of metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys and blood forming processes in the body.

## Volatile Organic Compounds (VOC)

Though VOCs are not directly a health hazard and are not considered a criteria pollutant, they react with NO<sub>x</sub> in the presence of sunlight to produce ozone. Hence, VOC emissions are regulated as a precursor of ozone. However, some State and local agencies regulate VOCs as Reactive Organic Gases (ROG's) which possess similar characteristics as VOC's.

The expected year of compliance with State and Federal standards for three criteria pollutants in the South Coast Air Basin is listed in **Table 5.3-2**.

**Table 5.3-2**  
**Expected Year of Compliance with State and Federal Standards for**  
**three Criteria Pollutants**  
**(South Coast Air Basin)**

Pollutant	Standard	Threshold Concentration Level	Expected Compliance Year
Ozone	NAAQS 1-hour	12 ppb	2010
	CAAQS 1-hour	90 ppb	beyond 2010
PM <sub>10</sub>	NAAQS Annual	50 ug/m <sup>3</sup>	2006
	NAAQS 24-hour	150 ug/m <sup>3</sup>	2000
	CAAQS Annual	20 ug/m <sup>3</sup>	beyond 2010
	CAAQS 24-hour	50 ug/m <sup>3</sup>	beyond 2010
PM <sub>2.5</sub> *	NAAQS 24-hour	15 ug/m <sup>3</sup>	--
	CAAQS Annual	12 ug/m <sup>3</sup>	--
CO	NAAQS 8-hour	9 ppm	Achieved**
	NAAQS 1-hour	35 ppm	Achieved**
	CAAQS 8-hour	9 ppm	2004
	CAAQS 1-hour	20 ppm	Achieved

ppb = Parts per billion parts of air, by volume

ug/m<sup>3</sup> = micrograms per cubic meter

ppm = parts per million parts of air, by volume

\*The EPA has not begun implementing PM<sub>2.5</sub> standards.

\*\*The Basin has been achieving the Federal 1-hour CO air quality standards since 1990. In 2002, the Basin achieved the 8-hour CO air quality standard. The Basin is still considered a non-attainment area until a petition for redesignation is submitted by the State and is approved by the EPA.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2003.



## Existing Air Quality Conditions

Historically, the Basin has the highest number of exceedances of the Federal air quality standards in the US. In 2002 alone, there were 60 days on which one or more Federal standards were exceeded somewhere in the Basin. However, air quality trends through 2002 reveal continuation of a downward trend in concentrations and the number of exceedances in relation to preceding years. In the past few years, O<sub>3</sub> levels in the Basin have been markedly improving in terms of maximum concentration, the number of days exceeding standards and the severity of episode levels. In a continuing trend of improving air quality, the Basin made it through the summer without experiencing a stage one episode beginning in 1997. While 1999 and 2000 were the first years in the history of ambient air monitoring that the Basin was not the location of the highest recorded ozone concentration in the nation, once again in 2001 the highest one-hour ozone concentration in the nation was reported in the Basin.

The Basin's exceedances of the maximum three-year mean of the eight-hour average O<sub>3</sub> concentration decreased 48 percent between 1976-1978 and 1999-2001. The number of exceedances of the maximum one-hour O<sub>3</sub> concentration decreased 81 percent between 1976 and 2001. However, the Basin retains its EPA designated non-attainment status for O<sub>3</sub>, CO and PM<sub>10</sub>. Once an area has been designated as non-attainment, the EPA requires the regulating authority to put in place a planned control strategy to achieve attainment. Some of the control strategies include addressing emissions from existing sources and requiring more prescriptive control technology requirements and emission offsets for any new sources. According to the 2003 AQMP, attainment of all Federal PM<sub>10</sub> standards is to occur no later than December 31, 2006 and Federal O<sub>3</sub> standards are to be achieved by 2010. The eight-hour Federal CO standard was to be attained no later than December 31, 2000; however, two exceedances were measured in the Basin during 2000. As of 2002, the Basin has met the CO standards in 2002 and the District will request reclassification as attainment in the next few years.

## Maximum Pollutant Concentrations

A summary of measured pollutant concentrations within the Riverside Metropolitan County for the year 2002 is presented in **Tables 5.3-3 to 5.3-9**. The Metropolitan Riverside County air quality monitoring station #1 is located just north of the Planning Area at 5888 Mission Boulevard in unincorporated Rubidoux. Metropolitan Riverside County #2 is located at 7002 Magnolia Avenue in the City of Riverside.

In 2002, the Federal and State standards for O<sub>3</sub> were exceeded, while neither Federal nor State standards for CO and SO<sub>2</sub> were exceeded. Although no exceedance of the State's daily standards for NO<sub>2</sub> was recorded, the Annual Arithmetic Mean (AAM) for NO<sub>2</sub> exceeded Federal standards in 2002. Measurements indicate Federal and State 24-hour, AAM and Annual Geometric Mean (AGM) standards for PM<sub>10</sub> were exceeded. Federal 24-hour AAM standards regarding PM<sub>2.5</sub> emissions were also exceeded during 2002.

**Table 5.3-3  
Measured Ozone Concentrations in 2002**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	8-hour Max (ppm)	Number of Days Standard Exceeded		
					Federal		State
					1-hr	8-hr	1-hr
Metropolitan Riverside County Station #1	4144	358	0.155	0.124	12	38	56
Metropolitan Riverside County Station #2	4146	--	--	--	--	--	--

ppm - Parts per million parts of air, by volume.

Source: South Coast Air Quality Management District, *Air Quality Data 2002*.

**Table 5.3-4  
Measured CO Concentrations in 2002**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	8-hour Max (ppm)	Number of Days Standard Exceeded <sup>1</sup>	
					Federal	State
					8-hr.	8-hr.
Metropolitan Riverside County Station #1	4144	358	8	3.0	0	0
Metropolitan Riverside County Station #2	4146	361	7	3.9	0	0

ppm - Parts per million parts of air, by volume.

<sup>1</sup> The Federal 1-hour (1-hour average CO > 35 ppm) and State 1-hour (1-hour average CO > 20 ppm) standards were not exceeded.

Source: South Coast Air Quality Management District, *Air Quality Data 2002*.

**Table 5.3-5  
Measured NO<sub>2</sub> Concentrations in 2002**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	AAM <sup>1</sup> (ppm)	Number of Days State Standard Exceeded 1-hour
Metropolitan Riverside County Station #1	4144	338	0.10	0.287	0
Metropolitan Riverside County Station #2	4146	--	--	--	--

ppm =Parts per million parts of air, by volume.

AAM = Annual Arithmetic Mean.

<sup>1</sup> The Federal standard is AAM NO<sub>2</sub> greater than 0.0534 ppm.

-- =Pollutant not monitored.

Source: South Coast Air Quality Management District, *Air Quality Data 2002*.

**Table 5.3-6**  
**Measured PM<sub>2.5</sub> Concentrations in 2002**

Monitoring Location	Station No.	Days of Data	24-hour Max (µg/m <sup>3</sup> )	#/(%) Samples Exceeding Standard	AAM <sup>1</sup> (µg/m <sup>3</sup> )
				Federal 24-hour	
Metropolitan Riverside County Station #1	4144	327	77.6	8/(2.5)	27.5
Metropolitan Riverside County Station #2	4146	115	75.5	2/(1.7)	27.1

ug/m<sup>3</sup> = microgram per cubic meter.

AAM = Annual Arithmetic Mean.

<sup>1</sup>Federal PM<sub>2.5</sub> standard is AAM > 15 µg/m<sup>3</sup>.

Source: South Coast Air Quality Management District, *Air Quality Data 2002*.

**Table 5.3-7**  
**Measured PM<sub>10</sub> Concentrations in 2002**

Monitoring Location	Station No.	Days of Data	24-hour Max (µg/m <sup>3</sup> )	#/(%) Samples Exceeding Standard		AAM (µg/m <sup>3</sup> )	AGM (µg/m <sup>3</sup> )
				Federal 24-hour	State 24-hour		
Metropolitan Riverside County Station #1	4144	118	130	0/(0)	81/(68.6)	58.5	53.4
Metropolitan Riverside County Station #2	4146	--	--	--	--	--	--

ug/m<sup>3</sup> = microgram per cubic meter.

AAM = Annual Arithmetic Mean.

AGM = Annual Geometric Mean.

Federal PM<sub>10</sub> standard is AAM > 50 µg/m<sup>3</sup>; State standard is AGM > 30 µg/m<sup>3</sup>.

-- = Pollutant not monitored.

Source: South Coast Air Quality Management District, *Air Quality Data 2002*.

**Table 5.3-8**  
**Measured SO<sub>2</sub> Concentrations in 2002**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm) <sup>1</sup>	24-hour Max (ppm) <sup>1</sup>
Metropolitan Riverside County Station #1	4144	351	0.02	0.002
Metropolitan Riverside County Station #2	4146	--	--	--

ppm= Parts per million parts of air, by volume.

<sup>1</sup> The State standards are 1-hour average > 0.25 ppm and 24-hour average > 0.045 ppm. No exceedances of the State standards were recorded.

The Federal standards are annual arithmetic mean SO<sub>2</sub> > 0.03 ppm, 3-hour average > 0.50 ppm, and 24-hour average > 0.14 ppm. No exceedances of these standards were recorded.

-- = Pollutant not measured.

Source: South Coast Air Quality Management District, *Air Quality Data 2002*.

As stated above, Metropolitan Riverside County Station #2 is located within the City of Riverside Planning Area, while Station #1 is located near Flabob Airport, north of the Planning Area. Because the Metropolitan Riverside County Station #2 does not measure concentrations of criteria pollutants ozone, nitrogen dioxide, sulfur dioxide and particulate matter (PM<sub>10</sub>), historical concentrations of these pollutants for the years 1992 through 2002 are based on data gathered at Station #1 (see Table 5.2-9). During these years, standards for carbon monoxide and nitrogen oxides were not exceeded on any day at the monitoring station best reflecting air quality within the planning area, while standards for ozone and particulate matter were exceeded regularly. During the mid- and late-1990s, the number of days with exceedances of ozone and particulate matter dropped in the early 1990s; however, emissions of those pollutants have increased in recent years.

**Table 5.3-9**  
**Measured Criteria Pollutant Concentrations at the Metropolitan Riverside County**  
**Station #1 for 1992-2002**

Year	Carbon Monoxide (CO) <sup>1</sup>		Ozone (O <sub>3</sub> ) <sup>2</sup>		Particulate Matter (PM <sub>10</sub> ) <sup>3</sup>		Nitrogen Oxides <sup>4</sup>	
	Max. 8-hr (ppm)	Days Exceeded	Max. 1-hr (ppm)	Days Exceeded	Max. 24-hr (ug/m <sup>3</sup> )	Days (% of Samples) Exceeded	Max. 1-hr (ppm)	Days Exceeded
1992	5.3	0	0.26	142	126	39 (63.9)	0.23	0
1993	7.1	0	0.26	132	231	42 (68.9)	0.14	0
1994	7.3	0	0.25	134	161	41 (67.2)	0.18	0
1995	6.5	0	0.21	109	219	38 (62.3)	0.15	0
1996	5.0	0	0.20	92	162	43 (68.3)	0.11	0
1997	5.8	0	0.19	89	163	41 (69.5)	0.12	0
1998	4.6	0	0.20	70	116	42 (53.8)	0.10	0
1999	4.4	0	0.14	38	153	46 (72.0)	0.13	0
2000	4.3	0	0.14	41	139	68 (70.0)	0.10	0
2001	3.4	0	0.14	41	136	78 (67.0)	0.15	–
2002	3.0	0	0.16	56	130	61 (68.6)	0.10	0

Abbreviations: ppm = parts per million; ug/m<sup>3</sup> = micrograms per cubic meter.

1. State standard for carbon monoxide: 20 ppm 1-Hour; 9.0 ppm 8-Hour. Less than 12 months of data for some years.

2. State standard for ozone: 0.09 ppm 1-Hour.

3. State standard for PM<sub>10</sub>: 50 ug/m<sup>3</sup>, 24 hour. Collected approximately every 6 days.

4. State standard for nitrogen oxides: 0.25 ppm 1-Hour.

Source: South Coast Air Quality Management District, *Air Quality Data*, 1992-2002.

## Sensitive Receptors

SCAQMD identifies sensitive receptors as populations that are more susceptible to the effects for air pollution than is the general population. Sensitive receptors located in or near the vicinity of known air emissions sources, including freeways, intersections and railways are of particular concern. Sensitive receptors include the following:

- health care facilities
- rehabilitation centers
- convalescent centers
- residences
- schools
- playgrounds
- child care centers
- athletic facilities

## Carbon Monoxide Hot Spots

Carbon monoxide (CO) “hot spots,” or areas where carbon monoxide is concentrated, typically occur near congested intersections, parking garages and other spaces where a substantial number of vehicles remain idle. Petroleum-powered vehicles emit carbon monoxide, an unhealthy gas (see Table 5.3-1) which disperses based on wind speed, temperature, traffic speeds, local topography and other variables. As vehicles idle in traffic congestion or in enclosed spaces, CO can accumulate to create CO hot spots that can impact sensitive receptors.

## Toxic Air Pollutants

Toxic air pollutants, such as asbestos, can be emitted during the demolition of buildings that contain toxic contaminants and during the operation of certain industrial processes that utilize toxic substances. Federal and State governments have implemented a number of programs to control toxic air emissions. For example, the Federal Clean Air Act provides a program for the control of hazardous air pollutants. In addition, the California legislature enacted programs including the Tanner Toxics Act (AB 1807), the Air Toxics Hot Spot Assessment Program (AB 2588), the Toxics Emissions Near Schools Program (AB 3205) and the Disposal Site Air Monitoring Program (AB 3374).

## Air Quality Management

### 2003 Air Quality Management Plan (AQMP)

The 2003 AQMP updates the demonstration of attainment with the Federal standards for ozone and PM<sub>10</sub>, replaces the 1997 attainment demonstration for the Federal CO standard, provides a basis for a maintenance plan for CO for the future and updates the maintenance plan for the Federal nitrogen dioxide (NO<sub>2</sub>) standard that the Basin has met since 1992.

The 2003 AQMP proposes policies and measures to achieve Federal and State standards for healthful air quality in the Basin. The revision to the Plan also addresses several State and Federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. This Plan is consistent with and builds upon the approaches taken in the 1997 AQMP and the 1999 Amendments to the Ozone SIP for the South Coast Air Basin. However, this revision points to an urgent need for additional emissions reductions (beyond those incorporated in the 1997/99 Plan) to offset increased emissions estimates from mobile sources and to meet all Federal criteria pollutant standards within the time frames allowed under the Federal Clean Air Act.

### SCAQMD Regulations

Fugitive Dust: Rule 403 is an existing AQMD regulation that requires watering and other actions to reduce the amount of fugitive dust particles released into the air due to grading, construction, demolition and other activities.

Fuel Efficiency: Title 24 regulations are statewide building design and construction standards that improve the energy efficiency of new buildings. Energy efficiency reduces the demand for electric generation, natural gas and other fuels. Energy efficient buildings also reduce the air emissions associated with electric generation and combustion of natural gas and other fuels.

Toxic Air Pollutants: The SCAQMD has developed and implements rules to control emissions of toxic air pollutants from specific sources. These include Rule 1401 (New Source Review of Toxic Air Contaminants) which requires certain businesses to obtain a permit to emit toxic air pollutants and Rule 1403 (Asbestos Emissions from Renovation/Demolition Activities) which regulates asbestos emissions during construction activities.

Odors: Construction activities and certain types of land uses, such as heavy industrial, commercial and agricultural uses may create objectionable odors in the Planning Area. SCAQMD Rule 402 prohibits such emissions. Any mobile or stationary source generating an objectionable odor is subject to Rule 402 and may be reported to the SCAQMD.

## **Local Programs**

Since the 1980s, the City of Riverside and its community partners have actively and aggressively adopted programs focused on improving air quality.

Tree Power-- Residential Shade Tree Program: Tree Power is a public benefit program that offers electric customers a rebate for planting selected shade trees in certain locations around their home to help save on summer cooling costs. As of 2003, more than 20,000 free shade trees were planted by the City of Riverside Public Utilities' electric customers. Studies show that well-placed trees around a structure can reduce air conditioning or cooling costs by as much as 20 percent. In addition to their energy-saving benefits, trees serve a variety of worthwhile functions that enhance air quality, including cleaning the air and preventing soil erosion, a major source of PM<sub>2.5</sub> and PM<sub>10</sub> pollutants.

UCR IntelliShare Program: UCR IntelliShare is a shared electric vehicle demonstration project at work on the UCR campus and beyond. This experimental program allows participants to rent and test electric cars for local trips. This project has been funded from the Federal Congestion Mitigation and Air Quality Improvement Program, the Riverside County Transportation Commission and CalTrans. As of 2003, over 300 UCR employees shared 25 electric vehicles to make local trips. Plans are in place to expand the program to include 35 vehicles at five stations. UCR IntelliShare is a step toward transportation options that can help reduce congestion, improve air quality and optimize land use in major congested areas such as business centers, university campuses and tourist destinations.

Riverside Infill Development Incentive: The City's Riverside Infill Development Incentive (RIDI) Program provides incentives for single-family residential infill developments of five parcels or less in designated low-income areas. One key program objective is to provide housing in close proximity to existing business and employment areas, reducing the need for extensive vehicle trips. Developers and owner/builders can be reimbursed up to \$5,000 per lot for actual expenses incurred for grading and soft costs. This program is available in the Arlanza, Casa Blanca, Downtown, Eastside and La Sierra neighborhoods

Electric Vehicle Purchase Incentive: This program provides rebates to the City of Riverside Public Utilities electric customers who purchase or lease an electric vehicle that is used as a primary or alternate means of transportation. The vehicles must be recognized by the Department of Motor Vehicles as street legal and must comply with all State laws. Rebates are available on new electric vehicles that the City of Riverside Public Utilities deems eligible. Customers receive rebates of five percent of the vehicle's total cash price up to \$5,000.

## Thresholds for Determining Level of Impact

For the purposes of this EIR, a significant impact will occur if Project implementation will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The significance of the air quality impacts is determined by the criteria set forth in the SCAQMD's 1993 *CEQA Handbook and Update*. Air quality impacts are considered significant if operational emissions exceed the threshold criteria shown in **Table 5.3-10**.

**Table 5.3-10**  
**SCAQMD Thresholds for Significant Contribution to Regional Air Pollution**

<b>Pollutant</b>	<b>Threshold of Significant Effect (operational phase)</b>
Reactive Organic Gases (ROG)	55 lbs/day, 0.03 tons/day
Nitrogen Dioxide (NO <sub>2</sub> )	55 lbs/day, 0.03 tons/day
Carbon Monoxide (CO)	550 lbs/day, 0.28 tons/day
Fine Particulate Matter (PM <sub>10</sub> )	150 lbs/day, 0.08 tons/day

Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

## Environmental Impact

Development pursuant to Project policies and regulatory standards will result in the addition of up to 38,100 new dwelling units and 39,600,000 square feet of new non-residential construction over the 20-year horizon of the General Plan within the Planning Area. Air quality impacts from future development facilitated by the Project can be divided into two types: short-term impacts and long-term impacts. Short-term impacts are associated with construction activities, and long-term impacts are those resulting from the continued operation of developed land uses and the associated increase in vehicular trips. Because the Project covers all development within the Planning Area through 2025, construction-related emissions cannot be reasonably analyzed at the programmatic level of analysis and thus are not quantitatively examined in this EIR. Project-level impacts will instead be evaluated on a project-by-project basis.

### SCAQMD Air Quality Management Plan

Although not required by State law, the City of Riverside General Plan includes an Air Quality Element, patterned largely after SCAQMD's *Model Air Quality Element*. The City of Riverside's Air Quality Element sets forth a series of objectives and policies directed at not only reducing air pollutant emissions resulting from implementation of the Project, but also improving existing air quality. For instance, General Plan Air Quality Element Policy 7.4 directs the City to coordinate with SCAQMD to ensure enforcement of the City's air quality programs aimed at reducing emissions.

The Project proactively addresses regional air quality in a manner consistent with policies and measures outlined in the 2003 Air Quality Management Plan (AQMP) established by the SCAQMD to achieve Federal and State standards for healthful air quality in the Basin. Therefore, the Project would not conflict with or obstruct implementation of the AQMP but will facilitate AQMP implementation. No impact with respect to this issue is anticipated to occur.

### Short-Term Impacts

Development pursuant to Project policies and regulatory standards will result in the addition of up to 38,100 new dwelling units and 39,600,000 square feet of new non-residential construction over the 20-year horizon of the General Plan within the Planning Area. For any construction project, short-term pollutant emissions can be produced from the following sources: construction equipment, dust from grading and earthmoving operations, workers' vehicles and architectural coatings such as paints.

Construction-related air quality impacts will occur continuously through 2025 as individual development projects are constructed. Construction activity will primarily generate airborne dust, CO and NO<sub>x</sub>. In addition, architectural coatings, exterior paints and asphalt may release volatile organic compounds (VOC). Because the Project only set forth broad parameters for new development and does not identify specific development proposals, construction-related emissions of individual future developments cannot be quantified at this time. Assuming relatively robust economic conditions over the next 20 years, construction activity will be a constant throughout the City and particularly within the Planning Area,



where land use policy focuses development, but the rate of development cannot be anticipated.

While individual development projects will be required to employ construction approaches that minimize pollutant emissions (e.g., watering for dust control, tuning of equipment, limiting truck traffic to non-peak hours), on a cumulative basis over the next 20 years pollutant emissions associated with construction activity will be significant. Short-term construction-related air quality impacts will be evaluated on a project-specific basis.

## Long-Term Impacts

Development pursuant to Project policies and regulatory standards will result in the addition of up to 38,100 new dwelling units and 39,600,000 square feet of new non-residential construction over the 20-year horizon of the General Plan within the Planning Area. This development will generate additional emissions over time from both stationary sources and vehicular trips. **Table 5.3-11** reports estimated air pollution emissions associated with existing conditions and buildout conditions of proposed General Plan land uses, in pounds per day. Future pollutant emissions were calculated using the URBEMIS 2002 program. Appendix C contains the worksheets documenting the calculations.

**Table 5.3-11**  
**Estimated Air Pollution Emissions for**  
**Existing and General Plan Buildout Land Uses**  
**(Pounds per Day)**

<b>Pollutant</b>	<b>Existing Land Use 2004</b>	<b>Land Use at Buildout of Project</b>	<b>Difference<sup>1</sup></b>	<b>Percent Change</b>
Reactive Organic Gases (ROG)	24,150	13,039	(11,111)	-46%
Nitrogen Dioxide (NO <sub>2</sub> )	22,082	7,667	(14,415)	-65%
Carbon Monoxide (CO)	227,002	64,125	(162,877)	-72%
Fine Particulate Matter (PM <sub>10</sub> )	16,075	24,105	8,030	50%
Sulfur Dioxide (SO <sub>2</sub> )	181	145	(36)	-20%

<sup>1</sup>Numbers in parenthesis indicate a reduction in emissions.

Source: Cotton/Bridges/Associates, 2004. Based on URBEMIS 2002 emissions inventory model.

As evident from Table 5.3-11, for all pollutant categories except PM<sub>10</sub>, long-term pollutant emissions 2025 are projected to decrease relative to existing year 2004 conditions. This can be explained by several factors and specifically, anticipated effective efforts of the SCAQMD to improve the Basin's air quality. Factors that will contribute to this reduction, even with new development in the City of Riverside and the Planning Area, include:

- Phase-out of older automobiles from the vehicle fleet
- Improvement of vehicle emissions-control technology, particularly that of diesel vehicles
- Better control of VOC release from all sources
- Improvement in emissions-control technologies for commercial and industrial operations

PM<sub>10</sub> typically originates from the stationary combustion of solid fuels, construction activities, industrial processes and atmospheric chemical reactions. A possible explanation for PM<sub>10</sub> increasing through 2025 is a lack of specific legal control measures for this pollutant. PM<sub>10</sub> will continue to be emitted from diesel exhaust and tire wear, which are difficult to regulate. Levels of PM<sub>10</sub> have exceeded State standards regularly in the past and are expected to continue exceeding these standards in the future.

Therefore, long-term PM<sub>10</sub> air quality impacts resulting from implementation of the Project will be significant, and mitigation is required.

Because the City of Riverside is within a nonattainment area, the City has identified numerous policies intended to reduce air pollutant emissions. The General Plan Air Quality Element contains the following policies related to land use strategies, transportation, stationary pollution sources, particulate matter, energy conservation, public education and multi-jurisdictional cooperation. Implementation of these policies will further reduce air pollutant emissions over the long term:

- |                |   |
|----------------|---|
| Policy AQ-1.1: | Ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status or geographic location, from the health effects of air pollution. |
| Policy AQ-1.2: | Consider potential environmental justice issues in reviewing impacts (including cumulative impacts for each project proposed).  |
| Policy AQ-1.3: | Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.   |
| Policy AQ-1.4: | Facilitate communication between residents and businesses on nuisance issues related to air quality.  |
| Policy AQ-1.5: | Encourage infill development projects within urbanized areas that include job centers and transportation nodes.   |
| Policy AQ-1.6: | Promote mixed-use development that allows the integration of retail, office, institutional and residential uses for the purpose of reducing costs of infrastructure construction and maximizing the use of land.  |
| Policy AQ-1.7: | Continue to promote planned residential development and infill housing, which reduce vehicle trips.   |
| Policy AQ-1.8: | Promote "Job/Housing Opportunity Zones" and incentives to support housing in job-rich areas and jobs in housing-rich areas, where the jobs are located at non-polluting or extremely low-polluting entities.  |
| Policy AQ-1.9: | Adhere to the adopted Master Plan for open spaces, trails and bikeways.   |

- Policy AQ-1.10: Encourage job creation in job-poor areas as a means of reducing vehicle miles traveled.
- Policy AQ-1.11: Locate public facilities and services so that they further enhance job creation opportunities.
- Policy AQ-1.12: Support mixed-use land use patterns, but avoid placing residential and other sensitive receptors in close proximity to businesses that emit toxic air contaminants to the greatest extent possible. Encourage community centers that promote community self-sufficiency and containment and discourage automobile dependency.
- Policy AQ-1.13: Encourage employment centers that are non-polluting or extremely low-polluting and do not draw large numbers of vehicles in proximity to residential uses.
- Policy AQ-1.14: Encourage community work centers, telecommuting and home-based businesses.
- Policy AQ-1.15: Promote land use patterns that reduce the number and length of motor vehicle trips and promote alternative modes of travel.
- Policy AQ-1.16: Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.
- Policy AQ-1.17: Avoid locating multiple-family developments close to commercial areas that emit harmful air contaminants.
- Policy AQ-1.18: Encourage “walkable” neighborhoods with pedestrian walkways and bicycle paths in residential and other types of developments to encourage pedestrian rather than vehicular travel.
- Policy AQ-1.19: Encourage future commercial areas to foster pedestrian circulation through the land use entitlement process and/or business regulation.
- Policy AQ-1.20: Create the maximum possible opportunities for bicycles as an alternative work transportation mode.
- Policy AQ-1.21: Cooperate and participate in regional air quality management plans, programs and enforcement measures.
- Policy AQ-1.22: Implement the required components of the Congestion Management Plan (CMP) and continue to work with Riverside County Transportation Commission on annual updates to the CMP.
- Policy AQ-1.23: Increase residential and commercial densities around rail and bus transit stations.

- Policy AQ-1.24: Support programs to provide “station cars” for short trips to and from transit nodes (e.g., Neighborhood Electric Vehicles).
- Policy AQ-1.25: Serve as an advocate for the City’s residents regarding location/expansion of facilities/uses (e.g., freeways, busy roadways), which are not within the City’s authority to regulate, to ensure that the health impacts of such projects are thoroughly investigated and mitigated.
- Policy AQ-1.26: Encourage neighborhood parks and community centers near concentrations of residential areas and include pedestrian walkways and bicycle paths to encourage non-motorized travel.
- Policy AQ-2.1: Support Transportation Management Associations between large employers and commercial/ industrial complexes.
- Policy AQ-2.2: Support programs and educate employers about employee rideshare and transit incentives for employers with more than 25 employees at a single location.
- Policy AQ-2.3: Cooperate with local, regional, State and Federal jurisdictions to reduce vehicle miles traveled (VMT) and motor vehicle emissions through job creation in job-poor areas.
- Policy AQ-2.4: Monitor and strive to achieve performance goals and/or VMT reduction which are consistent with SCAG’s goals.
- Policy AQ-2.5: Consult with the California Air Resources Board to identify ways that it may assist the City (e.g., providing funding, sponsoring programs) with its goal to reduce air pollution by reducing emissions from mobile sources.
- Policy AQ-2.6: Develop trip reduction plans that promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking.
- Policy AQ-2.7: Use incentives, regulations and Transportation Demand Management in cooperation with surrounding jurisdictions to eliminate vehicle trips that would otherwise be made.
- Policy AQ-2.8: Work with Riverside Transit Authority (RTA) to establish mass transit mechanisms for the reduction of work-related and non-work-related vehicle trips.
- Policy AQ-2.9: Encourage local transit agencies to promote ridership through careful planning of routes, headways, origins and destinations, types of vehicles.
- Policy AQ-2.10: Identify and develop non-motorized transportation corridors.

- Policy AQ-2.11: Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates to peripheral parking.
- Policy AQ-2.12: Encourage special event center operators to advertise and offer discounted transit passes with event tickets.
- Policy AQ-2.13: Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with four or more persons per vehicle for on-site parking..
- Policy AQ-2.14: Manage traffic flow through signal synchronization, while coordinating with and permitting the free flow of mass transit vehicles, as a way to achieve mobility.
- Policy AQ-2.15: Minimize traffic hazards and delays through highway maintenance, rapid emergency response, debris removal and elimination of at-grade railroad crossings.
- Policy AQ-2.16: Encourage, and to the extent possible, require through the land use entitlement or business regulation process, business owners to schedule deliveries at off-peak traffic periods.
- Policy AQ-2.17: Manage the City's transportation fleet fueling standards to achieve the best alternate fuel fleet mix possible.
- Policy AQ-2.18: Cooperate with local, regional, State and Federal jurisdictions to better manage transportation facilities and fleets.
- Policy AQ-2.19: Encourage the construction of high-occupancy vehicle (HOV) lanes or similar mechanisms whenever necessary to relieve congestion, safety hazards and air pollution, as described in the most recently approved Air Quality Management Plan.
- Policy AQ-2.20: Emphasize the use of high-occupancy vehicle lanes, light rail and bus routes and pedestrian and bicycle facilities when using transportation facility development to improve mobility and air quality.
- Policy AQ-2.21: Monitor traffic and congestion to determine when and where the City needs new transportation facilities to achieve increased mobility efficiency.
- Policy AQ-2.22: Preserve transportation corridors with the potential of high demand or of regional significance for future expansion to meet project demand.
- Policy AQ-2.23: Support full compliance with the SCAQMD's Clean Fleet Rules.

- Policy AQ-2.24: Support the development of alternative fuel infrastructure that is publicly accessible.
- Policy AQ-2.25: Allow or encourage programs for priority parking or free parking in City parking lots for alternative fuel vehicles, especially zero and super ultra low emission vehicles (ZEVs and SULEVs).
- Policy AQ-2.26: Develop and coordinate a plan for effective use of AB 2766 (Motor Vehicle Fee Program) funds so that such funds are used for projects and programs identified in the most recently approved Air Quality Management Plan.
- Policy AQ-2.27: Advocate to the State and Federal governments the need for increased regulation of diesel vehicles (e.g. trucks, trains and ships), an expedited schedule for fuel improvement and exhaust filtering and other emissions standards.
- Policy AQ-2.28: Advocate to the State for the use of smog checks for diesel vehicles similar to those required of gas powered vehicles.
- Policy AQ-2.29: Continue our membership in the Western Riverside County Clean Cities Coalition.
- Policy AQ-3.1: Support the use of centrally heated and/or air conditioned facilities to utilize automated time clocks or occupant sensors to control heating and air conditioning.
- Policy AQ-3.2: Require residential building construction to comply with energy use guidelines in Title 24 of the California Administrative Code.
- Policy AQ-3.3: Support SCAQMD's efforts to require stationary air pollution sources, such as gasoline stations, restaurants with charbroilers and deep fat fryers, to comply with or exceed applicable SCAQMD rules and control measures.
- Policy AQ-3.4: Require projects to mitigate anticipated emissions which exceed AQMP Guidelines.
- Policy AQ-3.5: Require the suspension of all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
- Policy AQ-3.6: Consider ordinances that encourage residential builders to go above and beyond State codes to conserve energy and reduce air pollution.
- Policy AQ-3.7: Support "green" building codes that require air conditioning/filtration installation, upgrades or improvements for all buildings, but particularly for those associated with sensitive receptors.

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Policy AQ-3.8:	Require use of pollution control measures for stationary and area sources through the use of BACT, BARCT, fuel/material substitution, cleaner fuel alternatives, product reformulation, change in work practices and of control measures identified in the latest AQMP.
Policy AQ-4.1:	Identify and monitor sources, enforce existing regulations and promote stronger controls to reduce particulate matter (e.g., require clean fuels for street sweepers and trash trucks, exceed the AQMD requirements for fleet rules).
Policy AQ-4.2:	Reduce particulate matter from agriculture (e.g., require use of clean non-diesel equipment and particulate traps), construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way and off-road vehicles to the extent possible.
Policy AQ-4.3:	Support the reduction of all particulates potential sources.
Policy AQ-4.4:	Support programs that reduce emissions from building materials and methods that generate excessive pollutants through incentives and/or regulations.
Policy AQ-4.5:	Cooperate with local, regional, State and Federal jurisdictions to better control particulate matter.
Policy AQ-4.6:	Support legislation or other negotiations which would prevent the idling of trains within the City's boundaries (e.g. institute nuisance actions).
Policy AQ-5.1:	Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.
Policy AQ-5.2:	Develop incentives and/or regulations regarding energy conservation requirements for private and public developments.
Policy AQ-6.1:	Provide air quality information through the City's website, including links to AQMD, CARB and other environmental-based sites.
Policy AQ-6.2:	Organize a City-sponsored event on a topic that improves air quality, including alternative fuel vehicle forums and clean household product events.
Policy AQ-6.3:	Work with school districts to develop air quality curriculum for students.
Policy AQ-6.4:	Encourage, publicly recognize and reward innovative approaches that improve air quality.
Policy AQ-6.5:	Involve environmental groups, the business community, special interests and the general public in the formulation and

	implementation of programs that effectively reduce airborne pollutants.
Policy AQ-6.6:	Provide public education to encourage use of low- or zero-emission vehicles.
Policy AQ-6.7:	Provide public education to encourage consumer choice of cleanest paints, consumer products, etc.
Policy AQ-7.1:	Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.
Policy AQ-7.2:	Support SCAG's <i>Regional Growth Management Plan</i> by developing intergovernmental agreements with appropriate governmental entities such as the Western Riverside Council of Governments, sanitation districts, water districts and those subregional entities identified in the <i>Regional Growth Management Plan</i> .
Policy AQ-7.3:	Participate in the development and update of those regional air quality management plans required under Federal and State law and meet all standards established for clean air in these plans.
Policy AQ-7.4:	Coordinate with the SCAQMD to ensure that the City's air quality plans regarding reduction of air pollutant emissions are being enforced.
Policy AQ-7.5:	Establish and implement air quality, land use and circulation measures that improve not only the City's environment but that of the entire region.
Policy AQ-7.6:	Establish a level playing field by working with local jurisdictions to simultaneously adopt policies similar to those in this Air Quality Element.
Policy AQ-7.7:	Support legislation that promotes cleaner industry, clean fuel vehicles and more efficient burning engines and fuels.
Policy AQ-7.8:	Support the introduction of Federal, State or regional enabling legislation to promote inventive air quality programs which otherwise could not be implemented.
Policy AQ-7.9:	Adhere with Federal, State and regional air quality laws, specifically with Government Code Section 65850.2, which requires that each owner or authorized agent of a project indicate, on the development or building permit for the project, whether he/she will need to comply with the requirements for a permit for construction or modification from the SCAQMD.



- Policy AQ-7.10: Incorporate, to the extent applicable and permitted by law, current and proposed AQMP measures.
- Policy AQ-7.11: Seek opportunities to pool AB 2766 (Motor Vehicle Fee Program) funds with neighboring cities to fund programs (e.g., traffic synchronization, fueling station infrastructure, etc.) that will mitigate mobile source emissions.

Implementation of the above policies will reduce identified PM<sub>10</sub> impacts, but the degree to which these policies will reduce impacts cannot be quantified precisely. Therefore, impacts relative to PM<sub>10</sub> emissions will remain significant and adverse.

## CO Hot Spots

At a programmatic level, it is not possible to conduct CO analyses across the Planning Area, as the exact timing and scope of actual development cannot be predicted. As such, CO “hot spot” analyses will be evaluated as individual development projects warrant.

## Odors

Future industrial and commercial uses established pursuant to the Project could generate objectionable odors within the Planning Area. SCAQMD Rule 402 governs odors emissions. Any objectionable odor may be reported to the SCAQMD, which resolves complaints through investigation within one business day of the received complaint, and issuance of Notices to Comply/Notices of Violation, when necessary. Continued application of these existing regulations will avoid any significant impacts associated with objectionable odors associated with implementation of the Project.

## Mitigation Measures

Mitigation is required to reduce PM<sub>10</sub> emissions. Policies within the General Plan Air Quality Element will facilitate continued City cooperation with SCAQMD and SCAG to achieve regional air quality improvement goals, encourage alternative transportation modes and implement transportation demand management strategies. In addition to these policies, the following mitigation measures will further reduce PM<sub>10</sub> air quality impacts:

- AQ-1 In accordance with AQMD Rule 403, the City will require the following measures to be taken during the construction of all projects to reduce the amount of dust and other sources of PM<sub>10</sub>:
- Dust suppression at construction site using surfactants and other chemical stabilizers
  - Wheel washers for construction equipment
  - The watering down of all construction areas
- AQ-2 The City will continue to implement effective citywide street sweeping.

- AQ-3 The City will use Best Available Control Technology in the City's practices, including but not limited to advanced diesel particulate traps on all City vehicles and purchase and use of aqueous diesel fuel vehicles.
- AQ-4 The City will adopt and implement a dust control ordinance for the purpose of establishing minimum requirements for construction and demolition activities and other specified sources in order to reduce man-made fugitive dust and the corresponding PM<sub>10</sub> emissions.
- AQ-5 The City will work to divert commercial truck traffic to off-peak periods to alleviate non-recurrent congestion as a means to improve roadway efficiency and reduce diesel emissions.
- AQ-6 The City will adopt incentives, regulations and/or procedures to manage paved and unpaved roads and parking lots so they produce the minimum practicable level of particulates.
- AQ-7 The City will collaborate with the EPA, SCAQMD and/or warehouse owners and operators to create regulations and programs to reduce the amount of diesel fumes released due to warehousing operations.

## Level of Impact after Mitigation

With implementation of the identified policies in the General Plan Air Quality Element and mitigation measures, short-term and long-term air quality impacts will be substantially lessened. However, the degree to which these measures will reduce PM<sub>10</sub> emissions cannot be quantified. Air pollutants levels of PM<sub>10</sub> are expected to continue to exceed the SCAQMD threshold criteria for significance. Impact associated with PM<sub>10</sub> emissions and cumulative construction activity is significant and unavoidable.

Because the Planning Area lies within a non-attainment air basin for criteria pollutants, potential air quality impacts related to emission of criteria pollutants will also remain significant and unavoidable. The significance of impacts to air quality resulting from specific future development projects will be determined on a project-by-project basis. If project-level impacts are identified, specific mitigation will be required per CEQA.

## References

South Coast Air Quality Management District, *Air Quality Management Plan*, 2003.

South Coast Air Quality Management District, *Air Quality Data*, 1992-2002.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.